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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/562,740	06/05/2006	Donald Borthwick	2003P07721WOUS	3839
22116 7590 03/02/2010 SIEMENS CORPORATION INTELLECTUAL PROPERTY DEPARTMENT 170 WOOD AVENUE SOUTH ISELIN, NJ 08830			EXAMINER VERDIER, CHRISTOPHER M	
			ART UNIT 3745	PAPER NUMBER
			MAIL DATE 03/02/2010	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/562,740

**Applicant(s)**

BORTHWICK ET AL.

**Examiner**

Christopher Verdier

**Art Unit**

3745

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 15 December 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 21-40 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 21-40 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 March 2009 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/GS/US)  
Paper No(s)/Mail Date \_\_\_\_\_

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on November 12, 2009 has been entered.

Applicant's arguments dated November 12, 2009 have been carefully considered. The examiner agrees with Applicant that the amended independent claims define over Lings 4,504,189, Liu 2002/0141863, Bessay 4,500,256, and Sato 5,249,922. Applicant is thanked for pointing out the specific differences between the amended claim language and these references. Several of the claims are anticipated by Pask 3,745,629 as set forth later below.

***Claim Objections***

Claims 21-31 are objected to because of the following informalities: Appropriate correction is required.

In claim 21, line 12, "the axis" should be changed to -- an axis --.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 21-40 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In claim 21, line 3, “the stationary stator cylinder” is unclear, because while claim 21, line 2 recites “a stationary cylinder”, it does not recite a stationary stator cylinder. In claim 21, line 4, “the axial rotor” is unclear if this refers to the rotatably supported rotor in claim 21, line 2, or not. In claim 21, line 9, “the blade form curve” lacks antecedent basis. In claim 21, line 12, “the rotor” is unclear if this refers to the rotatably supported rotor, or the axial rotor. In claim 32, line 7, “the rotor-side end blade curve form” lacks antecedent basis. In claim 33, lines 1-2, “the stator-side end blade curve form” lacks antecedent basis. In claim 35, the last line, “an outer casing” is unclear if this refers to the stationary stator cylinder in claim 32, or not.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 32-33 and 37-38, as far as they are definite and understood, are rejected under 35 U.S.C. 102(b) as being anticipated by Pask 3,745,629 (figures 1-2 and 4). Disclosed is a turbine blade 26, comprising a stator-side end near 32 located toward a stationary stator cylinder 14 of a turbine engine, a rotor-side end near 30 located toward an axial rotor (the shaft) of the turbine engine, a delivery side (26a in figure 4) located between the stator-side end and the rotor-side

end, and a suction side (to the left of 26a in figure 4) is located between the stator-side end and the rotor-side end and located down-stream of a leading edge of the blade with respect to a fluid flow direction, wherein the rotor-side end blade curve form is inclined toward the delivery side and the stator-side end blade curve form is inclined with respect to the fluid flow direction and inclined toward the delivery side. The stator side end blade form curve is inclined at an angle of about 25 degrees with respect to the fluid flow direction. The turbine blade is a stationary guide blade and is arranged in a turbomachine 10. Note that blade 30 is considered to be a turbine blade since it is located in a gas turbine engine.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 39-40, as far as they are definite and understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over Pask 3,745,629 in view of Sato 5,249,922. Pask 3,745,629 (figures 1-2 and 4) discloses a turbine blade substantially as claimed as set forth above, but does not disclose a second up-stream turbine guide blade is located at a constant axial distance from a rotating turbine blade (claim 39), and does not disclose a trailing edge of the second up-stream guide blade is located at a constant axial distance from the leading edge of the rotating blade at the rotor-side end (claim 40).

Sato (figures 10a-10c) shows an axial flow turbine having a turbine guide blade 1 located at a constant axial distance from a rotating turbine blade 2, with a trailing edge of the turbine guide blade being located at a constant axial distance from the leading edge of the rotating blade at a rotor-side end, for the purpose of providing uniform flow.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to form the turbine of Pask such that a second up-stream turbine guide blade is located at a constant axial distance from a rotating turbine blade and such that a trailing edge of the second up-stream guide blade is located at a constant axial distance from the leading edge of the rotating blade at the rotor-side end, as taught by Sato, for the purpose of providing uniform flow.

***Allowable Subject Matter***

Claim 21 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

Claims 22-31 and 34-36 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher Verdier whose telephone number is (571) 272-4824. The examiner can normally be reached on Monday-Friday from 10:00-6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward K. Look can be reached on (571) 272-4820. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Christopher Verdier/  
Primary Examiner, Art Unit 3745

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